DIVISION OF SCHOOL PLANT OPERATIONS

MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

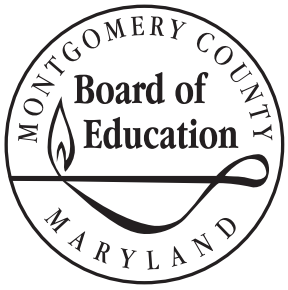
FY 2014
Healthy, High-Performance
GREEN CLEANING PLAN



MCPS SCHOOL PLANT OPERATIONS

Malcolm Baldrige National Quality Award

MONTGOMERY COUNTY PUBLIC SCHOOLS
ROCKVILLE, MARYLAND



VISION

We inspire learning by providing the greatest public education to each and every student.

MISSION

Every student will have the academic, creative problem solving, and social emotional skills to be successful in college and career.

CORE PURPOSE

Prepare all students to thrive in their future.

CORE VALUES

Learning
Relationships
Respect
Excellence
Equity

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SECTION I

Executive Summary

THE GOAL of the Green Cleaning program is to establish proactive housekeeping standards that promote a healthy and sustainable environment.

MONTGOMERY COUNTY PUBLIC SCHOOLS (MCPS) Division of School Plant Operations (DSPO), under the leadership of the Department of Facilities Management (DFM), is committed to providing a healthy-facility environment that is conducive to student learning and employee productivity. DSPO also recognizes its social responsibility to preserve natural resources for future generations. As a result of this commitment to students, staff, and the environment, DSPO has implemented this Healthy, High-Performance "Green" Cleaning program.

The Green Cleaning program serves to inform facility managers and educate the building service staff at all county schools on how to fulfill "green housekeeping" requirements. This plan was developed by DSPO, with support from MCPS Systemwide Safety Programs (SWSP). DSPO, under the oversight of DFM, has responsibility for full implementation of this plan and policies as it directs site-based staff who provide cleaning, grounds care, minor maintenance, monitoring of facility systems, and other building services and supports.

The plan documents the school system's commitment to purchasing and using cleaning and grounds-care products and methods that reduce adverse impacts on public health and the environment. Cleaning methods set forth herein emphasize the removal of indoor pollutants, including soils, particulates, microbes, and the like, while maintaining a safe and healthy environment for all students, workers, and other building occupants. The goal is to minimize the amount of product used as well as the amount of waste that is created. Products that fall under this plan include general-purpose, restroom, glass, and carpet cleaners; disinfectants; floor-care products; and hand soaps and paper supplies for restrooms. The product recommendations included in this plan provide current examples of acceptable cleaning products; however, substitute products may be used, provided they meet the criteria set forth in this plan.

The Green Cleaning program also includes details on how to implement the program, including cleaning practices, how cleaning products are stored and requirements for disposal, specific methods for cleaning, custodial equipment standards, purchasing criteria, and recycling. Requirements for grounds care and the effective operation of mechanical systems also are identified. Training, involvement, and close collaboration with students, staff, and the community is a key component of the program—promoting environmental principles beyond the school walls.

Additional resources are provided in the appendix, including Green Seal environmental requirements, information on the MCPS Integrated Pest Management program, a sample Building Maintenance Plan and systematic team cleaning criteria, links to pertinent websites, and a glossary of terms used in this plan.

Finally, the Green Cleaning program plan is a living document—one that will be revised and amended as better practices are identified.

CONTINUED

Guiding Principles for MCPS Green Cleaning

1. **Every day, every student has the right to a healthy and safe school environment.** Every adult is accountable and personally responsible for protecting the health and safety of students. Every adult is expected to work collaboratively to sustain a healthy and safe environment by—
   a. recognizing the factors that contribute to an unhealthy environment,
   b. knowing how each person's work contributes to the environment (we must all be responsible for our impact on the environment), and
   c. taking corrective actions and/or notifying appropriate staff necessary to restore the environment to healthy conditions.

2. **DSPO will provide training and communicate with staff and community** users to educate them on the value of the Green Cleaning program to the health and academic performance of students as well as the personal and environmental benefits of a successful program.

3. **Every employee has the right to work in a healthy and safe environment.** Workplace conditions are evaluated regularly in an effort to minimize worker/occupant exposure to harmful contaminants and cleaning residues. Systemic processes are in place to ensure compliance with OSHA standards; safe operating procedures; and use of safe tools, equipment, and supplies. Proper procedures, potential hazards, and safety information are documented, clearly communicated to employees, and readily available for review.

4. **What gets measured gets done.** DSPO uses an automated inspection tool to evaluate and manage school facilities for key environmental, safety, and health issues. This tool is used to monitor and verify that Green Cleaning program standards are being maintained. Regular assessments of school facilities are performed to track and manage information on environmental conditions. Information from these assessments is used to ensure consistent application of the standards throughout the school and drive improvement.

5. **Effective strategies that ensure consistent, thorough cleaning are achieved by applying systematic approaches to work planning and flow, considering the entire school campus and programs, including building, grounds, and activities.** DSPO staff use systematic work plans and custodial and grounds equipment that minimize student exposure to noise, dust, cleaning residue, and exhaust fumes. Specialized duties are assigned to each staff member so that the amount of time necessary to accomplish tasks is minimal, the quality of cleaning is consistent throughout the building, and the potential for occupant exposure to adverse effects is limited.

6. **Effective management of the exterior environment is essential to ensure healthy conditions are sustained in the interior environment.** The Green Cleaning program aims to minimize the amount of pollutants that enter the building, while maximizing the amount of pollutants that are extracted.

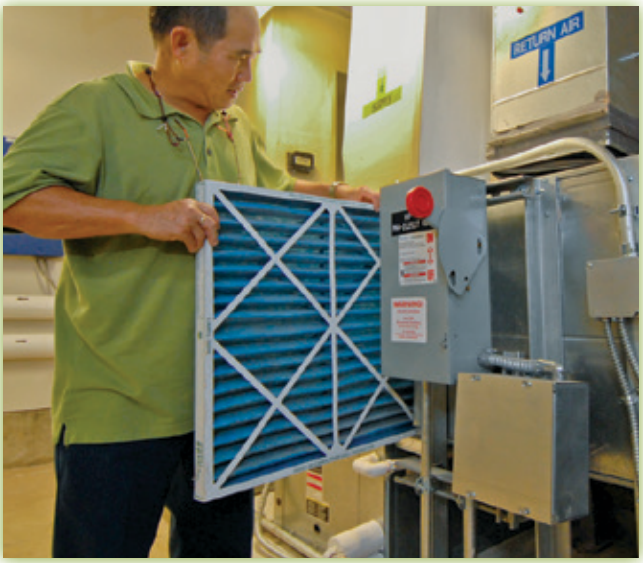
7. **Healthy, High-Performance Cleaning can be accomplished while the amount of chemicals used and moisture accumulated and/or released into the air is limited.**

8. **Emergency response plans and operating procedures will ensure rapid restoration of areas affected by unexpected incidents such as floods, spills, blood, etc.**

THE GREEN CLEANING PROGRAM aims to minimize the amount of pollutants that enter the building, while maximizing the amount of pollutants that are extracted.

9. **Disposal of cleaning waste in environmentally safe ways preserves and protects the local ecology.**

10. **Regularly scheduled preventive maintenance on HVAC systems ensures healthy indoor air quality, climate control, and longevity of equipment.** DSPO uses comprehensive building maintenance plans, employee training, and quality-assurance inspections to ensure that mechanical systems are operating effectively.



11. **Together, we can make a difference.** Training and involvement of and close collaboration with students, staff, and the community ensures sustainability of the Green Cleaning program.

Scope

The Green Cleaning program applies to building services provided by DSPO to clean and maintain school and administrative facilities and grounds. The program applies to the processes involved in the cleaning of schools and administrative facilities, operating and performing routine maintenance of mechanical systems, and grounds care. Repair of mechanical systems is the responsibility of the Division of Maintenance. Grounds care involves the use of hand tools and small tractors and/or mower equipment for trimming grass and shrubs and removing weeds and other debris located in close proximity to the building. Regular care of playing fields, steep slopes, and other identified areas is the responsibility of the Division of Maintenance.

Goal

The goal of the Green Cleaning program is to establish proactive housekeeping standards that promote a healthy and sustainable environment. These standards cover proper selection and use of chemicals and equipment and green cleaning procedures. Additionally, this program is designed to maintain the interior of schools and administrative facilities in a manner that maximizes the amount of pollutants extracted; minimizes worker/occupant exposure to harmful contaminants and cleaning residues; minimizes the amount of chemicals, particles, and moisture accumulated and/or released into the air by the cleaning process; and disposes of cleaning waste in an environmentally responsible manner.

The program uses products that have been evaluated and certified by third-party organizations such as Green Seal, the Carpet and Rug Institute, and other certifying agencies. Internally developed criteria and standards include the following:

- Products equipped with dispensing/portion control systems
- Non-caustic chemicals that prevent exposure, allergic reactions, and splatter accidents
- Products with reduced effluent waste water contaminates (e.g., corrosives, heavy metals, phosphates)
- Products packaged in recyclable containers
- Equipment with dust-control systems and that minimize emission of air or water pollutants
- Equipment that operate in a safe and quiet manner.

Vulnerable Populations

MCPS protects vulnerable building occupants by selecting cleaning products, equipment, and processes designed to minimize chemical exposures. Green Seal-certified products are used, as feasible. Cleaning operations, such as floor stripping/waxing and ventilation equipment cleaning that may affect vulnerable occupants, are scheduled during off-hours. Additionally, facility administrative staff works with school health nurses and facilities management personnel to address the needs of students and employees with specific conditions that can be affected by cleaning activities.

SECTION 2

Recycling and Energy Conservation

MONTGOMERY COUNTY PUBLIC SCHOOLS (MCPS) will pursue every opportunity proactively to conserve resources and reduce energy consumption and the overall carbon footprint of the school system through DFM's School Energy and Recycling Team (SERT) program. The mission of SERT is to reduce energy consumption significantly and increase recycling rates systemwide through—

- training and education;
- incentives, recognition, and award programs for conservation;
- accessible energy and recycling data;
- individual school programs for energy and environmental investigation-based learning opportunities and student involvement at all levels; and
- conservation operations and procedures.

MCPS Recycling Regulation ECF-RC requires all staff and students to recycle responsibly. Schools and offices are responsible for collecting, sorting, and disposing of recyclable materials properly. Each school designates a SERT recycling team, which may include students, administration, and building service staff. Recycling-awareness materials, infrastructure, and support are provided to schools from the SERT office.

Multiple recycling bins for specific types of waste are available to prevent cross-contamination between recyclables and materials to be incinerated. Recyclables from interior and exterior recycling bins are collected daily or as frequently as needed. Paper-recycling bins, bottles/cans recycling bins, and trash bins must be labeled clearly and placed strategically throughout the building. Each classroom and office has a minimum of one paper recycling bin and one trash bin. The contents from paper recycling bins and bottles/cans recycling bins are collected separately and loaded into designated exterior paper and bottles/cans recycling dumpsters. All trash is taken to a designated trash room. Additionally, yard waste generated at the school must not be placed in plastic liners and then placed in a designated area. A Maximo work order should be placed to the maintenance depot for a special pick-up to have the yard waste removed and recycled.

The SERT office also assists school teams in conducting lighting audits and de-lamping where possible. MCPS retrofits lighting in schools with energy-efficient lamps, such as compact fluorescent lamps (CFL) and light-emitting diodes (LED) lamps, where feasible. MCPS uses computerized energy-management systems and reduces plug loads by turning off computers, printers, and other equipment when not in use, to further decrease energy consumption and enhance operational efficiency in schools and facilities.

SECTION 3

Performance Metrics and Program Assessment

METRICS

A LEVEL-OF-CLEANLINESS AUDIT must meet a minimum level 2 or "Ordinary Tidiness," in accordance with the standards of the APPA Leadership in Educational Facilities' Custodial Staffing Guidelines, as measured through daily inspections by on-site staff and biannual quality-assurance inspections by central administrative staff that provide oversight. At this level, cleanliness must be maintained as follows:

1. Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days' worth of dirt, dust, stains, or streaks.
2. All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable with close observation.
3. Restroom and shower tile and fixtures gleam and are odor-free. Supplies are adequate.
4. Trash containers and pencil sharpeners are empty, clean, and odor-free.

At least 75 percent (by cost of total annual purchases) of cleaning products, disposable janitorial paper, and trash bags purchased must be certified as sustainable cleaning products and materials.

At least 50 percent of custodial equipment purchases must be certified by the Carpet and Rug Institute and/or meet criteria identified by LEED rating system 3.7, GS-42, GGHC, ES Credit 5, or other reputable rating system.

At least 85 percent of schools must meet minimum standards of systematic team cleaning, as measured by biannual quality-assurance inspections.

MCPS's goal is to achieve an 80 percent recycling rate by 2020.

PROGRAM ASSESSMENT

THIS PLAN WILL BE EVALUATED ANNUALLY as part of the division's Process Management and Continuous Improvement program. Sustainability criteria from U.S. Green Building Council—LEED, industrywide product and equipment innovations, and customer feedback will be considered to update the plan.

At least 75 percent (by cost of total annual purchases) of cleaning products, disposable janitorial paper, and trash bags purchased must be certified as sustainable cleaning products and materials.

SECTION 4

Green Cleaning Policies

THE FOLLOWING POLICIES govern the selection and proper use of cleaning products and equipment, green-cleaning procedures, and training.

PRODUCT SELECTION

PERFORMANCE-LEVEL STANDARDS

Products purchased in the categories of multipurpose cleaners, metal polish, floor finishes, strippers, or other products must meet one or more of the following standards for the appropriate category:

- Green Seal GS-37, for general-purpose, bathroom, glass, and carpet cleaners used for industrial and institutional purposes.
- Environmental Choice CCD-110, for cleaning and degreasing compounds
- Environmental Choice CCD-146, for hard-surface cleaners
- Environmental Choice CCD-148, for carpet and upholstery care
- Green Seal GS-40, for industrial and institutional floor-care products
- Environmental Choice CCD-112, for digestion additives for cleaning and odor control
- Environmental Choice CCD-113, for drain or grease traps additives
- Environmental Choice CCD-115, for odor-control additives
- Environmental Choice CCD-147, for hard-floor care

Disinfectants–Only EPA-registered disinfectants or EPA-registered disinfection devices must be used for disinfection.

Additional Product-Selection Criteria:

- All products in original or secondary containers must be labeled clearly and prominently state dilution recommendations, in accordance with OSHA/MOSH hazard communication regulations.

- Minimize use of aerosol products.
- Give preference to products that eliminate fragrances or show that any fragrances meet the Code of Practice of the International Fragrance Association.
- Give preference to products containing a total phosphorous (compounds) of not more than 0.5 percent by weight.
- Give preference to products in concentrated form.
- Give preference to products with recyclable primary packaging.
- Give preference to packaging made with post-consumer recycle content.
- Product manufacturer must be able to document that the products have been certified by one of the required third-party standards.
- All products must be reviewed and approved prior to use by the team leader, Systemwide Safety Programs and/or Environmental Services/IAQ unit, Division of Maintenance.

Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs for the applicable product category:

- U.S. EPA Comprehensive Procurement Guidelines, for Janitorial Paper and Plastic Trash Can Liners.
- Green Seal GS-09, for paper towels and napkins.
- Green Seal GS-01, for tissue paper.
- Environmental Choice CCD-082, for toilet tissue.

- Environmental Choice CCD-086, for hand towels.
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.

Hand soaps must meet one or more of the following standards:

- No antimicrobial agents (other than as a preservative), except where required by health codes and other regulations (i.e., food service, safety and health requirements).
- Green Seal GS-41, for industrial and institutional hand cleaners.
- Environmental Choice CCD-104, for hand cleaners and hand soaps.
- Environmental Choice CCD-170, for hand sanitizers, with the exception of germicidal solutions, which must be applied where required by health codes and other regulations.

In compliance with the established standards of the policy, the following products have been identified for use in schools and offices.

Category	Manufacturer/Product	Certification
Multipurpose cleaner	3M, 34L All Purpose Johnson Diversity / Alpha HP	Green Seal 37
Floor Cleaner	Hillyard / Super Shine 3M, 3H Neutral	Green Seal 37
Glass Cleaner	3M, 34L All Purpose Johnson Diversity / Alpha HP	Green Seal 37
Bathroom Cleaner	3M, 5L Disinfectant Johnson Diversity / Alpha HP	Green Seal 37
Floor Finish	Essential Industries/G2	Green Seal 40
Floor Stripper	Essential Industries/Green Strip	Green Seal 40
Hand Soap	Spectrowax	Currently evaluating non-antibacterial, Green Seal-certified product
Toilet Paper	Cascade, 100% recycled, 65% postconsumer	Green Seal 01
Hand Towels	Cascade, 100% recycled content	Green Seal 09
Trash Bags	Calico, 20% recycled content	Calico

CLEANING EQUIPMENT

The policy requires that newly purchased custodial equipment meet the following criteria:

Wet-cleaning equipment for carpets should have high- quality extractors that leave carpeting dry to prevent microbial growth.

- Vacuum cleaners must be certified by the Carpet and Rug Institute "Green Label" testing program for vacuum cleaners and operate with a sound level of less than 70 dBA.
- Carpet-extraction equipment used for restorative deep cleaning must be certified by the Carpet and Rug Institute's "Bronze Seal of Approval" testing program for deep-cleaning extractors.
- Powered floor machines, including electric and battery-powered floor buffers and burnishers, must be equipped with vacuums, guards, and/or other devices for capturing fine particulates and operate with a sound level of less than 70 dBA.
- Floor equipment must not be powered by propane.
- Automated scrubbing machines must be equipped with variable-speed feed pumps and on-board chemical metering to optimize the use of cleaning fluids. Alternatively, the scrubbing machines must use only tap water with no added cleaning products.
- Powered equipment must be ergonomically designed to minimize vibration, noise, and user fatigue.
- Equipment must be designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

In compliance with the established standards of the policy, the following equipment have been identified by the division for use in schools and offices.

Category	Manufacturer/Product	Certification
Backpack (vacuum)	Pro team/Quarterback	CRI
Upright (vacuum)	Windsor/Sensor	CRI
Wet/Dry (vacuum)	Pro team/Pro guard	69 dBA
Battery Scrubber*	Minuteman/27 inch	70 dBA
Battery Burnisher*	Tenant/Speed Gleam	70 dBA
Electric Burnisher	Advance Advolution	CRI
Carpet Extractor	Viper	CRI
Low-speed Buffer	General/Floor craft	Minimum use

* ***Note:*** *Pursuing opportunities to replace equipment powered by acid batteries with equipment powered by gel batteries, as they become available.*

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EQUIPMENT MAINTENANCE PROGRAM

MCPS site-based staff inspect regularly and maintain routinely all motorized equipment to ensure that each piece operates at a safe and optimum level, in accordance with the manufacturer's specifications. Equipment that does not meet specified levels of effective operation will be scheduled for repair or replacement by the DSPO Equipment Repair Shop staff through the Maximo work order system.

CLEANING PROCEDURES

The Green Cleaning program objectives for maintaining the interior of schools and administrative offices are to maximize the amount of pollutants extracted; minimize worker/occupant exposure to harmful contaminants and cleaning residues; minimize the amount of chemicals, particles, and moisture accumulated and/or released into the air by the cleaning process; and dispose of cleaning waste in an environmentally responsible manner.

All cleaning practice requirements are in accordance with OSHA/MOSH Hazard Communication requirements and regulations.

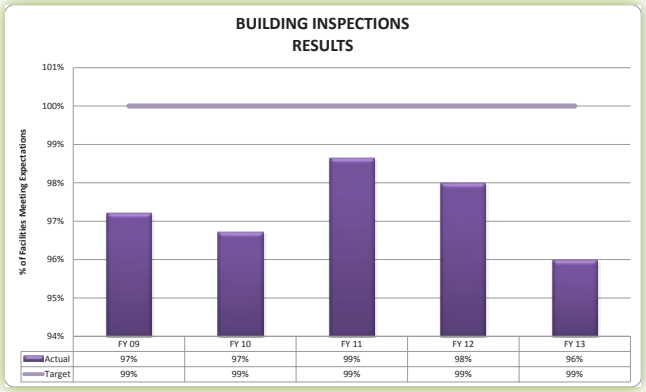
Information provided below is listed in two categories:

1. General/routine procedures (which may apply to all facilities), and
2. Specialized processes (which apply to specific functional areas).

Routine Practices

The following guidelines apply generally to most areas in a facility.

DSPO USES A SYSTEMATIC TEAM CLEANING (STC) approach that maximizes the quality, quantity, and consistency of building services.

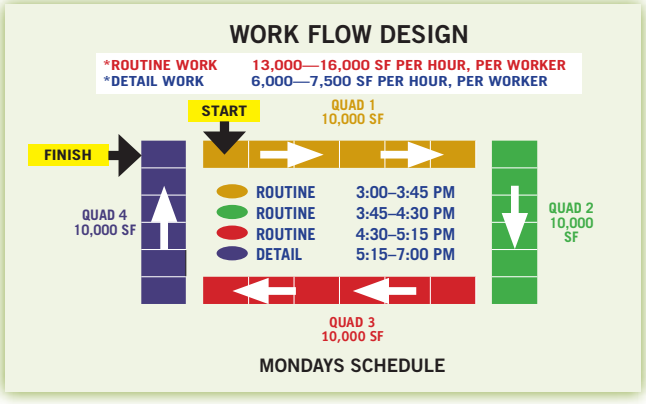


SYSTEMATIC TEAM CLEANING

DSPO uses a Systematic Team Cleaning (STC) approach that maximizes the quality, quantity, and consistency of building services. STC also reduces error and equipment and energy costs. This approach systematizes the application of personnel, tasks, frequency, time, and space to get the most out of the cleaning process. Additionally, quality-assurance inspections are performed daily by on-site staff and as scheduled by off-site supervisors.

A fully implemented STC program must include the following:

- Written work plan, including routine, detailed, and project-cleaning schedules.
- Written building inspections performed weekly by school-based staff. These inspections should be used to track performance and drive improvement.
- Use of Healthy, High-Performance Green Cleaning products.
- Use of Healthy, High-Performance Green Cleaning equipment.



STORAGE AND SAFE-HANDLING REQUIREMENTS FOR CLEANING PRODUCTS

MCPS requires that all employees who use hazardous chemicals must complete online training related to safe chemical

handling, use, and storage. MCPS also requires all facilities to maintain inventories and safety data sheets for all hazardous chemicals used or stored on site. Employees are directed to report significant chemical spills immediately to MCPS safety staff; Montgomery County Fire and Rescue Service is contacted, as needed. Licensed hazardous waste management contractors perform remediation of significant chemical spills.

Upon hiring, building service employees are assigned online training related to safe chemical use. Retraining or additional training is provided when new chemical hazards are introduced, employees demonstrate a need for additional training, or as required by occupational safety and health regulations.

STORAGE REQUIREMENTS

- Containers must be closed securely when not in use
- Storage areas that contain cleaning products must be fully ventilated
- Custodial closets and storage areas must be kept clean and free of standing water
- All concentrated cleaning chemicals must be diluted per manufacturer recommendations for each application, to minimize worker exposure and minimize the amount of product used.
- Products must not be used without proper ventilation, and directions on the SDS (Safety Data Sheet) must be followed.
- Products must not be mixed.
- Employees are required to use personal protective equipment (PPE), including rubber gloves, face mask, goggles, and slip-resistant footwear to reduce exposure to chemicals.

CLEANUP AND DISPOSAL OF MERCURY-CONTAINING LIGHTS

Exhausted (burnt-out) fluorescent, mercury vapor, high-intensity discharge, and LCD projector/ bulbs are regulated as hazardous waste due to their mercury content and may not be disposed of in the regular trash. Special bulb-collection containers are provided at each location for disposal by a hazardous waste disposal contractor.

REDUCING MICROBIAL GROWTH

- Wet-cleaning equipment for carpets should have high-quality extractors that allow carpeting to dry thoroughly in 12 hours or less.
- Disinfectant must be applied in areas or on surfaces where pathogens can collect and breed, such as in restrooms or on door handles, faucets, and other touch points. Disinfectants are to be used only where required.
- When using chemical disinfectants or cleaner/disinfectants, product-label directions must be followed for the preparation of disinfecting solutions. A dispensing system must be used to ensure proper dilution rate and prescribed cleaning method, including appropriate dwell time, to allow disinfectant to take effect prior to cleaning.
- All-purpose cleansers must be used instead of bleach to remove microbes.
- Microfiber mops and cloths must be changed on a regular basis; at a minimum, replace mop heads and cloths daily, wash and rinse thoroughly after each use (or when they smell or show visible dirt) even when rinsed thoroughly.
- Mops must be allowed to dry completely between uses; mops should be hung in janitorial closets on hooks provided, not stored in buckets or slop sink, because air drying reduces microbial growth.
- Areas where water collects or condenses must be cleaned.

MCPS PROTECTS vulnerable building occupants by selecting cleaning products, equipment, and processes designed to minimize chemical exposures. Green Seal-certified products are used, as feasible.

DUSTING

Effective dusting, dust mopping, and vacuuming thoroughly captures dust particles and prevents them from circulating in the air, moving to other surfaces, or being drawn into ventilation equipment.

- Microfiber, lint-free dusting cloths are preferred instead of cotton cloths. Use microfiber mops and cloths that do not require application of chemicals, and that reduce the use of disposable paper towels.
- Soiled cloths should be cleaned thoroughly after every use.

CONTINUED

Specialized Cleaning Processes

RESTROOM CLEANING

Effective restroom cleaning procedures remove harmful germs and bacteria that may be present on door handles, fixtures, walls, floor and floor drains, and other surfaces. All of these must be cleaned and disinfected regularly to prevent the spread of contagious illnesses. Since restrooms are heavily used, there must be a schedule to ensure that they are refreshed frequently. Refresher schedules include restocking of hand soap, toilet paper, and paper towels, as well as spot cleaning where required.

- Clean all touch points daily, including floors, countertops, basins, toilet partitions, toilets, urinals, light switches, mirrors, door knobs, and showers
- Disinfect floors, countertops, basins, toilets, urinals, and showers daily (after cleaning)
- Ensure that floor drains are operating properly

PROPER AND FREQUENT entryway cleaning prevents outdoor contaminants from being spread throughout the building.

ENTRYWAY CLEANING

Proper and frequent entryway cleaning prevents outdoor contaminants from being spread throughout the building. This process extends the longevity of the flooring systems and reduces the need for other floor maintenance tasks, such as stripping and applying additional coats of floor finish. Use of high-quality walk-off mats traps contaminants, enhances safety by preventing slipping, and inhibits mold and mildew growth.

- Provide roll-up mats at each outside door; vacuum and spot clean roll-up entryway mats daily and use carpet extractor with wand attachment weekly—proper and frequent entryway cleaning prevents outdoor contaminants from being spread throughout the building, which extends the longevity of the flooring systems and reduces the need for floor-maintenance tasks (such as stripping and applying additional coats of floor finish)
- Replace mats when there is visible surface wear

Floor Care

Floor care includes cleaning and maintaining processes for hard floor surfaces (i.e., resilient tile, wood, and carpet). Floors must be vacuumed, dust mopped, wet mopped, auto scrubbed, and/or spot cleaned daily as required.

RESILIENT TILE

- Vacuum or use microfiber dust mops, on a predetermined schedule of frequency, to remove and contain particulate matter from flooring surfaces.
- To protect and restore appearance of the floor tile, the following periodic maintenance must be performed: Floor-scrubbing regularly to reduce the need to completely remove the finish by stripping with harmful chemicals. Less-frequent stripping minimizes occupant and worker exposure to aggravating dust particles and harmful chemicals released into the environment by the floor-care process. Also, this technique is safer than using the mop-and-bucket method, because the worker is never standing in slippery water and chemical solutions. Perform floor scrubbing when students and other occupants are not present in the immediate area.

WOOD

Wood floors become slippery when dust and dirt are present. Proper maintenance of floors is required to sustain safe conditions. Therefore, the following procedures are required:

- Clean floors several times during the day (at least four to five times depending on use) using a microfiber dust mop, battery scrubber, or a weighted bar with clean damp towels.
- Clean gymnasium floors at least one half hour before sporting activities, using battery scrubber or weighted bar with towel and neutral cleaner.
- Clean floors according to a specified schedule and between events, using a microfiber dust mop that is restricted for use only on the gym floor.
- Place walk-off matting at the exterior doors as well as the gym entrances. Entrance and exit doors should be kept closed when the gym is not in use.

CARPET

A carpet-extraction-cleaning process must be used to release soil deep in the carpet fiber. This process ensures that a minimum amount of water is flushed into the carpet to prevent mold growth and air-quality issues. After this process, the carpet should be dry within 24 hours.

Cafeteria and Kitchen Cleaning

An effective cafeteria- and kitchen-cleaning process removes harmful germs and bacteria that may be present on surfaces. Surfaces must be cleaned and sanitized regularly to prevent the spread of disease and contagious illnesses as well as to secure a safe food preparation and serving environment.

SANITIZING FOOD PREPARATION AND EATING AREAS

- Clean daily all floors, countertops, basins, appliances/equipment, light switches, and door knobs.
- After each meal or use, clean all surfaces that come in contact with food preparation; keep these surfaces free of food scraps and debris.
- Keep floors clean, free of food scraps, debris, and any signs of bio-contamination; clean at least once daily.
- Ensure that floor drains are operating properly and they are odor-free; flush clogged drains with hot water to remove clogs.
- Trash receptacles must be tightly covered and emptied at least once daily (or when full); do not allow trash to overflow.
- Inspect all food preparation and eating areas for evidence of insects, rodents, or bio-contamination such as mold.

SANITIZING KITCHENS

Food-service sanitizers must meet the requirements of the Department of Health and Mental Hygiene Code of Maryland Regulations (COMAR) 10.15.03, Food Service Facilities, and are exempt from the Performance-Level Standards, outlined on page 6 of this document.

- Mighty Suds opaque pink liquid detergent for pots, pans, and other utensils. (Diamond Chemical Co.)
- Slash Oven Cleaner & Degreaser (Diamond Chemical Co.)
- Chlorine bleach for sanitizing
- LSR Scale and Film Remover for removing lime scale deposits (Diamond Chemical Co.)
- Germicidal Rinse/Sanitizer for yogurt and smoothie machines (Diamond Chemical Co.)
- Hood Cleaner heavy-duty liquid detergent for cleaning automatic hood systems (Diamond Chemical Co.)

SECTION 5

Requirements for Grounds Care

THE GREEN CLEANING PROGRAM objectives for maintaining grounds are to remove hazards (e.g., broken glass and other trash), prevent outside pollutants from entering the facility, minimize the amount of pollutants released into the air and grounds, and minimize noise.

Grass and Weed Trimming

- Inspect the grounds daily and remove trash and any other hazards.
- Inspect grounds-care equipment before use to ensure proper operation and reduction of airborne particulates and fumes. Check to ensure that all safety devices are in place and functioning properly. Staff must wear personal protective equipment when performing grounds-care functions.
- Do not use a blower to remove normal to average accumulation of dust and debris near building entrances. Instead, sweep or hose down.
- Do not use a mechanical mower on areas where ground cover is shorter than 1 inch or where dirt is exposed.
- Grounds waste should be left in designated areas for pickup.
- Gasoline-powered equipment must —
  - be operated within 50 feet of the building before occupants arrive or after they have departed;
  - meet federally mandated requirements for emissions and maximum allowable noise levels as mandated by the Montgomery County Department of Environmental Protection; and
  - not be operated indoors or stored in unapproved locations.
- Gasoline and other flammable liquids must be used and stored in accordance with OSHA/MOSH and fire code requirements.
- Gasoline must be stored and dispensed using FM-approved or UL-listed safety cans. Any leaks or spills must be cleaned promptly.

Snow Removal and Deicing:

- Remove snow using physical means. Equipment such as plows, shovels, or snow-blowers should be used when possible, to minimize the use of deicing chemicals to remove snow.
- Use safe procedures provided during safety training to prevent injuries related to overexertion, cold stress, and slips and falls.
- When possible, use alternative deicers instead of chloride salts for de-icing as chloride salts contribute to scaling, cracking, and spalling concrete and are harmful to vegetation. Use deicers sparingly and remove excess promptly after threat of freezing has passed.

Integrated Pest Management

An integrated pest management policy (MCPS ECF-RB) promotes the use of nontoxic options such as routine inspections, sanitation, structural repairs and nonchemical methods. When nontoxic methods prove to be ineffective, pesticides are only applied by Maryland Department of Agriculture (MDA) certified pesticide applicators. The school inspections are performed by MDA-certified pesticide applicators and pesticide application notifications are issued to staff and students in accordance with MDA regulations.

Eliminate the use of herbicides; weeds may be removed by hand.

SECTION 6

Maintenance of Mechanical Systems

REGULARLY SCHEDULED preventive maintenance on HVAC systems is performed to ensure healthy indoor air quality, climate control, and longevity of equipment. Building maintenance plans (BMPs) are in place to document preventive maintenance routines, indoor air quality assessments, schedules of required tasks (i.e., filter changes, lubrication and calibration, service records on ventilation systems, proper operating values, and log sheets). Inspection of building mechanical systems and recordkeeping to confirm adherence to BMP requirements are to be performed regularly.

Building maintenance plans (BMPs) are in place at many schools to document preventive maintenance routines and schedules of required tasks (i.e., filter changes, lubrication and service records on ventilation systems, proper operating values, and log sheets). As part of the BMP program, pre- and post-indoor-air-quality assessments are performed to ascertain the operational effectiveness of mechanical systems. Regular inspections of mechanical systems and recordkeeping are performed to ensure adherence to BMP requirements.

SECTION 7

Training Requirements

UPON HIRE, each staff member is required to undergo initial training on standard operating procedures, the proper sequencing and frequency of cleaning steps, and the proper use of personal protective equipment (PPE). This training may occur before personnel are assigned to a facility and/or it may be conducted at the site, before the staff member begins independent work.

As part of initial training, all personnel are given standard safety training, including focusing on reducing and preventing ergonomic injuries and exposure to hazardous materials, green-cleaning processes, proper use of equipment, and the like.

Site-specific training may focus on unique standards and requirements for the facility to which the staff member will be assigned. Site-specific training will cover—

- a building-specific cleaning plan;

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- tailored procedural training (i.e., servicing areas for vulnerable populations) based on the building-specific plan; and
- hazardous communication standards.

All staff members will receive continuing training and/or education on an annual basis to maintain their knowledge of correct procedures for safety, tools, techniques, and pertinent environmental standards. For new hires, at least 24 hours of basic training must be provided upon initial employment, followed by in-service training, continuing education, and/or professional development opportunities on an annual basis.

Technical training is required for employees responsible for the safe and effective operation of mechanical systems (e.g., boiler operations, air conditioning, and plant equipment operations).

Training records on each staff member are maintained for all training specified within this program.

Sources

Custodial staffing guidelines for educational facilities. (1998, second edition). The Association of Higher Education Facilities Officers.

Montgomery County Public Schools Procurement Manual, section 19, Environmentally Preferred Procurement.

UCLA bruin green cleaning program. (2012, February). UCLA Facilities Management, Maintenance & Alterations.

Yale University, Green Cleaning Standards. (2012, February).

Annotated Code of Maryland, Education Section, 5-112, Bids, Green Product Cleaning Supplies

Awards

2011 Green Cleaning Award, Schools and University

2013 Green Ribbon School District Award

MCPS Sustainability Program—U.S. Green Ribbon Program 2013 award

Websites

SERT website: www.greenschoolsfocus.org

MCPS Systemwide Safety Unit website: www.montgomeryschoolsmd.org/departments/facilities/systemwidesafety.shtm

www.montgomeryschoolsmd.org/departments/schoolplantops/

www.montgomeryschoolsmd.org/departments/maintenance/

www.montgomeryschoolsmd.org/departments/facilities/

Glossary

APPA: Association of Physical Plant Administrators

Building Maintenance Plan (BMP): A building-specific ventilation equipment operators manual.

De-lamping: Removal of light bulbs to lower light levels and save energy.

Green Cleaning/Green Housekeeping: Use of cleaning methods and products with environmentally friendly ingredients designed to preserve human health and environmental quality.

Integrated Pest Management Policy: The use of most effective combined pest-control alternatives, to prevent or reduce pests and damage caused by pests to acceptable levels.

Level of Cleanliness Audit: The objective process used to evaluate the cleanliness of facilities.

OSHA: Occupational Safety and Health Administration

MOSH: Maryland Occupational Safety and Health

Personal Protective Equipment (PPE): Equipment worn to minimize exposure to a variety of hazards

Post-consumer recycle content: Material or finished product that has served its intended use and has been diverted or recovered from waste destined for disposal.

Safety Data Sheet (SDS): A document that contains information to provide workers and emergency personnel with procedures for handling potential hazards (health, fire, reactivity, and environmental) and how to work safely with a chemical product.

SERT: School Energy and Recycling Team

Systematic Team Cleaning (STC): A systematic cleaning method based on specialization.

U.S. Green Building Council (USGBC): A private 501(c)3, membership-based nonprofit organization that promotes sustainability in how buildings are designed, built, and operated.

LEED: Leadership in Energy and Environmental Design—a green building certification program that recognizes best-in-class building strategies and practices.

DIVISION OF SCHOOL PLANT OPERATIONS

Resources and Guidelines

http://www.montgomeryschoolsmd.org/departments/schoolplantops/resources.shtm

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